REMARKS / ARGUMENTS

By their amendments, the applicants have amended the claims to clarify their wording particularly with regard to the inverse multiplexing protocol. . As the Examiner will appreciate, inverse multiplexing is a well-known protocol wherein a connection, consisting of a stream of packets, on a high speed link is divided among a group of lower speed links for transmission. At the receiving end, the packets are collected from the group of lower speed links and reassembled into a high speed stream. The inverse multiplexing protocol selects the group of links and feeds the packets from the incoming stream to them in a round robin fashion. Inverse multiplexing is different from ordinary multiplexing where individual channels are transmitted over a common link.

In the prior art, the packets would all be multiplexed onto output links emanating from the same device. In accordance with the invention, the packets can be redirected to an expansion port that allows links connected to another similar device to form part of a common inverse multiplex group. It is clear that the Examiner's principal reference, Kumata, has nothing to do with inverse multiplexing. Kumata just relates to an add-drop multiplexer / demultiplexer which takes a high speed multiplexed signal and demultiplexes it into a series of separate TDM channels contained in the high speed signal, or vice versa. This is not inverse multiplexing in accordance with the term as it is understood in the art.

Even though Kumata clearly does not relate to an inverse multiplexing system, the Examiner asserts that nevertheless Kumata could meet the terms of the claims for inverse multiplexing because Kumata discloses an arrangement of add-drop devices in a SONET ring structure thus, according to the Examiner, forming a "inverse multiplexing group". While such an assertion is clearly not consistent

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with the teachings of Kumata (no person skilled in the art would normally consider a series of add-drop devices connected into a ring structure to constitute an inverse multiplexing group), it is respectfully submitted that even by stretching the wording of the claims, Kumata cannot remotely be made to fall within the claim language set forth in claim 1. The add-drop devices disclosed in Kumata are not cascaded. They are merely separate egress/ingress points to the SONET ring. Separate TDM channels connected to the interfaces 20, 50 can be multiplexed onto the high speed fiber ring and then dropped at any of the other nodes on the ring. There is no teaching of inverse multiplexing packets in a round-robin fashion over multiple links from different devices.

Inverse multiplexing is a well-known term of art, and clearly to one skilled in the art Kumata does not relate to an inverse multiplexer.

While claiming that Kumata teaches inverse multiplexing, which is vigorously denied, the Examiner states that Kumata fails to expressly teach the disclosed transmitting outgoing packets of the "cascaded inverse multiplexing group on outgoing physical links of more than one inverse multiplexing device". This feature is a very important aspect of the invention. The prior art as it pertains to inverse multiplexers does not allow an inverse multiplexing group to be constituted of physical links connected to more than one device.

In order to meet this alleged deficiency, the Examiner cites Upham. Upham again has absolutely nothing whatsoever to do with inverse multiplexing. It is not understood how a ring structure with multiple add-drop multiplexers that support multicasting will, when combined with Kumata result in an inverse multiplexing group that is capable of consisting of links from more than one device.

Both Kumata and Upham relate to conventional multiplexer/demultiplexers where multiple channels are transmitted on a high speed link in multiplex form

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and then demultiplexed at the other end. In an inverse multiplexer, by definition, a single channel or connection is divided amongst several lower speed links for transmission and then recombined at the other end as a single high speed channel. Kumata and Upham cannot be therefore considered analogous art.

The provision of multicasting capability in Kumata, even if for the purposes of argument it was assumed that such a combination would be obvious, which is not admitted, would not result in a inverse multiplex system wherein an inverse multiplex group was formed from links coming from different devices. Like Kumata and Upham, Dempsey has absolutely nothing to do with inverse multiplexing. Dempsey again relates to a conventional multiplexing/demultiplexing system wherein a ring network has a series of network elements that appear to act as conventional add-drop devices. These devices extract individual channels from the network. They do not permit inverse multiplexing operations.

It is quite clear that none of the prior art has anything to do with inverse multiplexers, and the prior art does not teach a scaleable inverse multiplexer which can form an inverse multiplex group from cascaded devices. The Examiner appears to have attempted to make the claim read on to conventional add-drop multiplexers within a SONET ring, which is clearly not designed for inverse multiplexing, but in the applicant's respectful submission such an attempt of stretching the claim language to read onto something that has nothing to do with the device claimed does not bear up to detailed scrutiny.

The discussion of the prior art has taken place with reference to claim 1, but similar arguments apply to the method claim, which is the method counterpart of device claim 1.

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It is believed that the application is now in condition for allowance, and reconsideration and allowance are earnestly solicited.

Respectfully submitted,

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